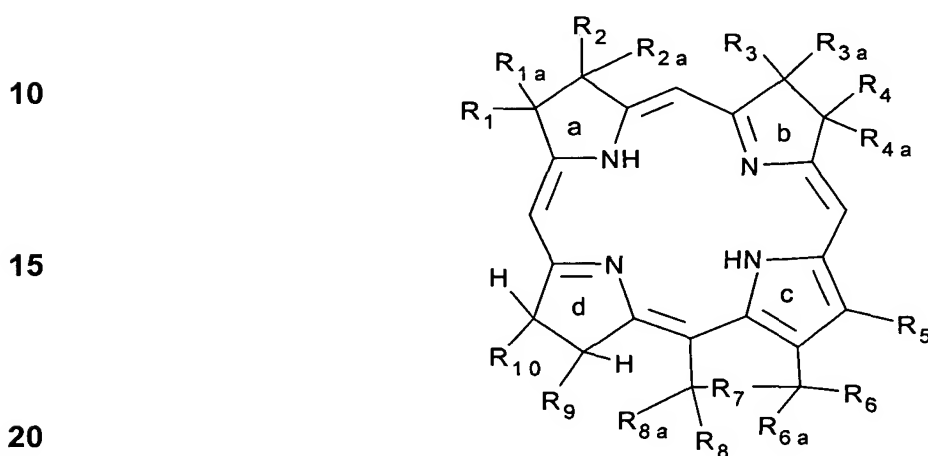


**WE CLAIM:**

1. A tetrapyrrole compound containing a fluorinated substituent, wherein the tetrapyrrole compound is a chlorin or bacteriochlorin.

2. The compound of claim 1 wherein the fluorinated substituent is a fluorinated phenyl, fluorinated heterocyclic or fluorinated alkyl group.

3. A compound of the formula:



or a pharmaceutically acceptable derivative thereof, wherein:

$R_1$ ,  $R_{1a}$ ,  $R_2$ ,  $R_{2a}$ ,  $R_3$ ,  $R_{3a}$ ,  $R_4$ ,  $R_{4a}$ ,  $R_5$ ,  $R_6$ ,  $R_{6a}$ ,  $R_8$ ,  $R_{8a}$ ,  $R_9$ , and  $R_{10}$  are independently hydrogen, lower alkyl of about 1 through 8 carbon atoms, lower alkenyl of about 1 through 8 carbon atoms, or lower alkyl of about 1 through 8 carbon atoms substituted with at least one halogen, hydroxy, carboxy, ester, aromatic, heterocyclic, ether, amide, or amine group; where two  $R_1$ ,  $R_{1a}$ ,  $R_2$ ,  $R_{2a}$ ,  $R_4$ ,  $R_{4a}$ ,  $R_6$ ,  $R_{6a}$ ,  $R_8$ ,  $R_{8a}$ ,  $R_9$  and  $R_{10}$  groups on adjacent carbon atoms may be taken together to form a covalent bond or two  $R_1$ ,  $R_{1a}$ ,  $R_2$ ,  $R_{2a}$ ,  $R_3$ ,  $R_{3a}$ ,  $R_4$ ,  $R_{4a}$ ,  $R_6$ ,  $R_{6a}$ ,  $R_8$ , and  $R_{8a}$  groups on the same carbon atom may form a double bond to a divalent pendant group;  $R_1$  or  $R_2$  may additionally be  $-\text{CH}=\text{CH}_2$ ,  $-\text{CHO}$ ,  $-\text{COOH}$ ,  $-\text{COOR}_a$ , or  $\text{H}_3\text{C}-\text{C}(\text{OR}_{11})$  ;

$R_7$  is  $-\text{CH}_2-$ , or  $=\text{NR}_{12}$ , or a covalent bond, where  $R_{11}$  and  $R_{12}$  are independently hydrogen, lower alkyl of about 1 through 8 carbon atoms, lower alkenyl of about 1 through 8 carbon atoms, or lower alkyl of about

1 through 8 carbon atoms substituted with at least one halogen, hydroxy, carboxy, ester, aromatic, heterocyclic, ether, amide, or amine group; provided that at least one of  $R_1$ ,  $R_{1a}$ ,  $R_2$ ,  $R_{2a}$ ,  $R_3$ ,  $R_{3a}$ ,  $R_4$ ,  $R_{4a}$ ,  $R_5$ ,  $R_6$ ,  $R_{6a}$ ,  $R_7$ ,  $R_8$ ,  $R_{8a}$ ,  $R_9$  and  $R_{10}$  contains at least one fluorinated pendant group  
 5 selected from the group consisting of fluorinated alkyl groups, fluorinated phenyl groups and fluorinated heterocyclic moieties.

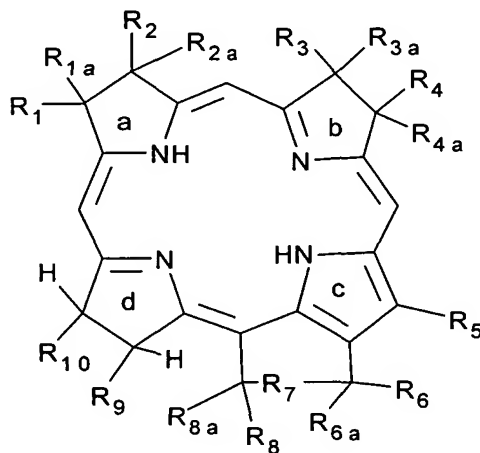
4. The compound of claim 3 wherein  $R_9$  is  $-\text{CH}_2\text{CH}_2\text{CO}_2R_a$ , where  $R_a$  is hydrogen or lower alkyl of 1-8 carbons.

5. A compound of the formula:

10

15

20



or a pharmaceutically acceptable derivative thereof, wherein:

$R_1$  and  $R_2$  are each independently substituted or unsubstituted alkyl, substituted or unsubstituted alkenyl,  $-\text{C}(\text{O})R_a$  or  $-\text{COOR}_a$ , where  $R_a$  is hydrogen, substituted or unsubstituted alkyl, substituted or unsubstituted alkenyl, substituted or unsubstituted alkynyl, or substituted or unsubstituted cycloalkyl;

$R_{1a}$  and  $R_{2a}$  are each independently hydrogen or substituted or unsubstituted alkyl, or together form a covalent bond;

$R_3$  and  $R_4$  are each independently hydrogen or substituted or unsubstituted alkyl;

$R_{3a}$  and  $R_{4a}$  are each independently hydrogen or substituted or unsubstituted alkyl, or together form a covalent bond;

R<sub>5</sub> is hydrogen or substituted or unsubstituted alkyl;

R<sub>6</sub> and R<sub>6a</sub> are each independently hydrogen or substituted or unsubstituted alkyl, or together form =O;

R<sub>7</sub> is a covalent bond, alkylene, azaalkyl, or azaaralkyl;

- 5 R<sub>8</sub> and R<sub>8a</sub> are each independently hydrogen or substituted or unsubstituted alkyl, or together form =O;

R<sub>9</sub> and R<sub>10</sub> are each independently hydrogen, or substituted or unsubstituted alkyl;

- each of R<sub>1</sub>-R<sub>10</sub>, when substituted, is substituted with one or more  
 10 substituents each independently selected from Q, where Q is alkyl, haloalkyl, halo, pseudohalo, -COOR<sub>b</sub> where R<sub>b</sub> is hydrogen, alkyl, alkenyl, alkynyl, cycloalkyl or aryl, aryl, heteroaryl, cycloalkyl, heterocyclyl, OR<sub>c</sub> where R<sub>c</sub> is hydrogen, alkyl, alkenyl, alkynyl, cycloalkyl, aralkyl, or aryl, CONR<sub>d</sub>R<sub>e</sub> where R<sub>d</sub> and R<sub>e</sub> are each independently hydrogen, alkyl, alkenyl, alkynyl, cycloalkyl  
 15 or aryl, NR<sub>f</sub>R<sub>g</sub> where R<sub>f</sub> and R<sub>g</sub> are each independently hydrogen, alkyl, alkenyl, alkynyl, cycloalkyl, aralkyl or aryl, =NR<sub>h</sub> where R<sub>h</sub> is alkyl, alkenyl, alkynyl, cycloalkyl, aralkyl or aryl, or is an amino acid residue;

- each Q is independently unsubstituted or is substituted with one or more substituents each independently selected from Q<sub>1</sub>, where Q<sub>1</sub> is alkyl,  
 20 haloalkyl, halo, pseudohalo, -COOR<sub>b</sub> where R<sub>b</sub> is hydrogen, alkyl, alkenyl, alkynyl, cycloalkyl or aryl, aryl, heteroaryl, cycloalkyl, heterocyclyl, OR<sub>c</sub> where R<sub>c</sub> is hydrogen, alkyl, alkenyl, alkynyl, cycloalkyl or aryl, CONR<sub>d</sub>R<sub>e</sub> where R<sub>d</sub> and R<sub>e</sub> are each independently hydrogen, alkyl, alkenyl, alkynyl, cycloalkyl or aryl, NR<sub>f</sub>R<sub>g</sub> where R<sub>f</sub> and R<sub>g</sub> are each independently hydrogen, alkyl, alkenyl,  
 25 alkynyl, cycloalkyl or aryl, or is an amino acid residue;

with the proviso that the compound contains at least one fluorine atom.

6. The compound of claim 5, wherein:

R<sub>1</sub> is substituted or unsubstituted alkyl;

- R<sub>2</sub> is substituted or unsubstituted alkyl, substituted or unsubstituted  
 30 alkenyl, or -C(O)R<sub>a</sub>, where R<sub>a</sub> is substituted or unsubstituted alkyl;

R<sub>1a</sub> and R<sub>2a</sub> together form a covalent bond;

R<sub>3</sub> and R<sub>4</sub> are each independently substituted or unsubstituted alkyl;  
 R<sub>3a</sub> and R<sub>4a</sub> are each independently hydrogen, or together form a covalent bond;

- R<sub>5</sub> is substituted or unsubstituted alkyl;
- 5** R<sub>6</sub> and R<sub>6a</sub> together form =O;  
 R<sub>7</sub> is azaalkyl, or azaaralkyl;  
 R<sub>8</sub> and R<sub>8a</sub> together form =O;  
 R<sub>9</sub> and R<sub>10</sub> are each independently substituted or unsubstituted alkyl;  
 each of R<sub>1</sub>-R<sub>10</sub>, when substituted, is substituted with one or more
- 10** substituents each independently selected from Q, where Q is halo, pseudohalo, haloalkyl, COOR<sub>b</sub> where R<sub>b</sub> is hydrogen or alkyl, OR<sub>c</sub> where R<sub>c</sub> is alkyl or aralkyl, NR<sub>f</sub>R<sub>g</sub> where R<sub>f</sub> and R<sub>g</sub> are each independently hydrogen, alkyl or aralkyl, or =NR<sub>h</sub> where R<sub>h</sub> is aralkyl;  
 each Q is independently unsubstituted or is substituted with one or
- 15** more substituents each independently selected from Q<sub>1</sub>, where Q<sub>1</sub> is halo, pseudohalo, or haloalkyl.

7. The compound of claim 5, wherein:

- R<sub>1</sub> is unsubstituted alkyl;
- R<sub>2</sub> is substituted or unsubstituted alkyl, unsubstituted alkenyl, or -
- 20** C(O)R<sub>a</sub>, where R<sub>a</sub> is unsubstituted alkyl;  
 R<sub>1a</sub> and R<sub>2a</sub> together form a covalent bond;  
 R<sub>3</sub> and R<sub>4</sub> are each independently unsubstituted alkyl;  
 R<sub>3a</sub> and R<sub>4a</sub> are each independently hydrogen, or together form a covalent bond;
- 25** R<sub>5</sub> is unsubstituted alkyl;  
 R<sub>6</sub> and R<sub>6a</sub> together form =O;  
 R<sub>7</sub> is azaalkyl, or azaaralkyl;  
 R<sub>8</sub> and R<sub>8a</sub> together form =O;  
 R<sub>9</sub> is substituted alkyl;
- 30** R<sub>10</sub> is unsubstituted alkyl;

each of  $R_1$ - $R_{10}$ , when substituted, is substituted with one or more substituents each independently selected from Q, where Q is halo, pseudohalo, haloalkyl,  $\text{COOR}_b$  where  $R_b$  is hydrogen or alkyl,  $\text{OR}_c$  where  $R_c$  is alkyl or aralkyl,  $\text{NR}_f\text{R}_g$  where  $R_f$  and  $R_g$  are each independently hydrogen, alkyl  
 5 or aralkyl, or  $=\text{NR}_h$  where  $R_h$  is aralkyl;

each Q is independently unsubstituted or is substituted with one or more substituents each independently selected from  $Q_1$ , where  $Q_1$  is halo, pseudohalo, or haloalkyl.

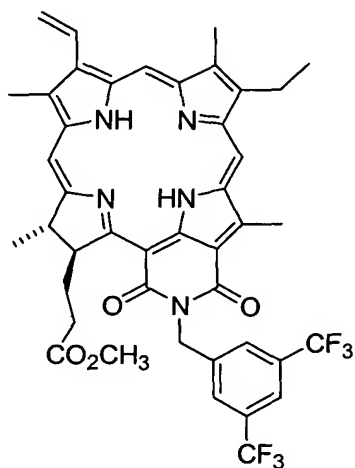
8. The compound of claim 5, wherein:  
 10  $R_1$  is methyl;  
 $R_{1a}$  and  $R_{2a}$  together form a covalent bond;  
 $R_3$  is methyl;  
 $R_4$  is ethyl;  
 $R_{3a}$  and  $R_{4a}$  are each independently hydrogen, or together form a  
 15 covalent bond;  
 $R_5$  is methyl;  
 $R_9$  is  $\text{CH}_2\text{CH}_2\text{COOH}$  or  $\text{CH}_2\text{CH}_2\text{COOMe}$ ;  
 $R_{10}$  is methyl.

9. The compound of claim 5, wherein:  
 20  $R_2$  is  $\text{CH}=\text{CH}_2$ ,  $\text{CH}(\text{OR}_{20})\text{CH}_3$ ,  $\text{C}(\text{O})\text{Me}$ ,  $\text{C}(=\text{NR}_{21})\text{CH}_3$  or  $\text{CH}(\text{NHR}_{21})\text{CH}_3$ ;  
 where  $R_{20}$  is methyl, butyl, heptyl, dodecyl or 3,5-bis(trifluoromethyl)-benzyl; and  
 $R_{21}$  is 3,5-bis(trifluoromethyl)benzyl.

10. The compound of claim 5, wherein:  
 25  $R_7$  is  $=\text{NR}_{20}$ , where  $R_{20}$  is methyl, butyl, heptyl, dodecyl or 3,5-bis(trifluoromethyl)benzyl.

30

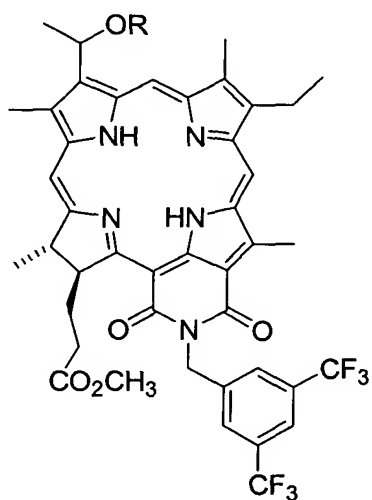
11. The compound of claim 5 having the formula:



or a pharmaceutically acceptable derivative thereof.

**5**

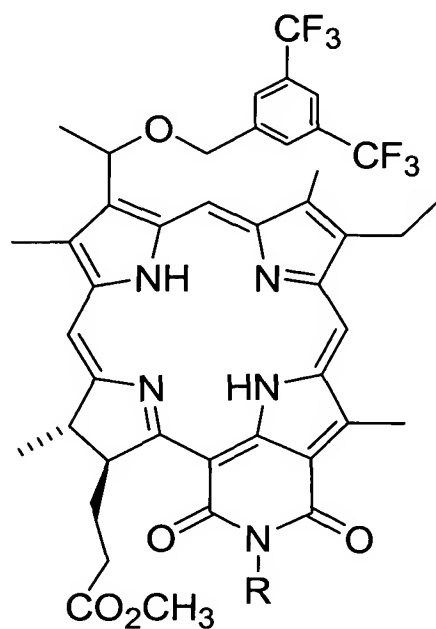
12. The compound of claim 5 having the formula:



or a pharmaceutically acceptable derivative thereof, wherein:

R is methyl, butyl, heptyl or dodecyl.

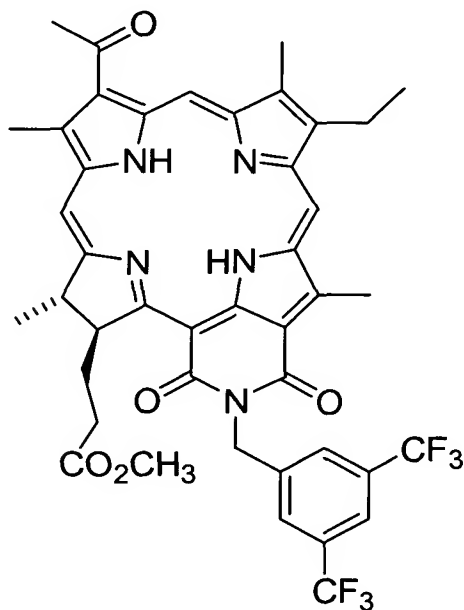
13. The compound of claim 5 having the formula:



or a pharmaceutically acceptable derivative thereof, wherein:

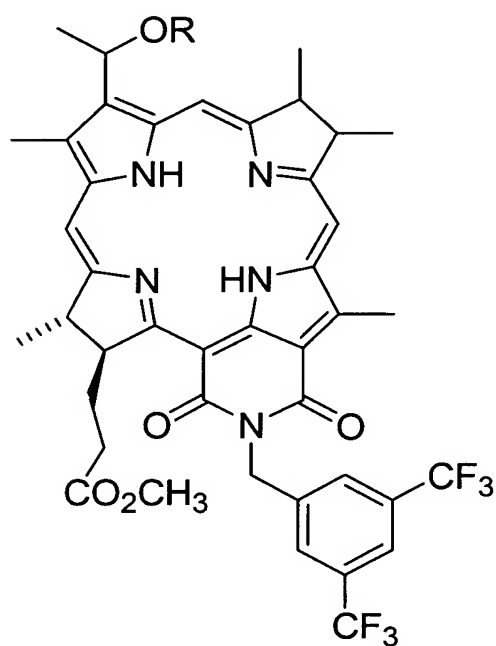
R is methyl, butyl, heptyl or dodecyl.

- 5 14. The compound of claim 5 having the formula:



or a pharmaceutically acceptable derivative thereof.

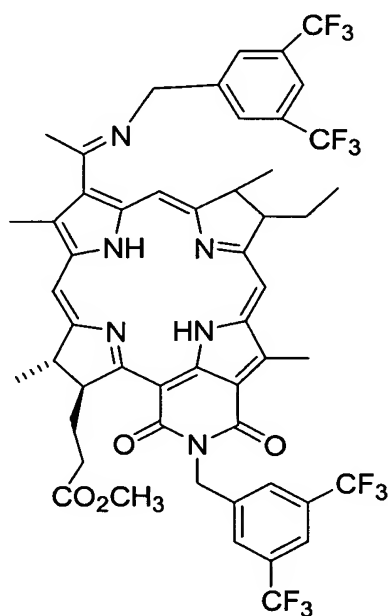
15. The compound of claim 5 having the formula:



or a pharmaceutically acceptable derivative thereof, wherein:

R is methyl, butyl, heptyl or dodecyl.

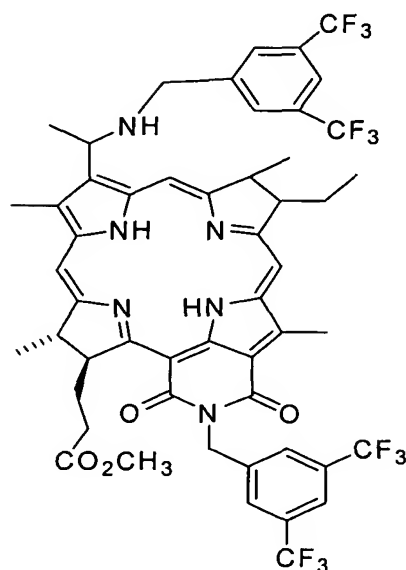
- 5 16. The compound of claim 5 having the formula:



or a pharmaceutically acceptable derivative thereof.

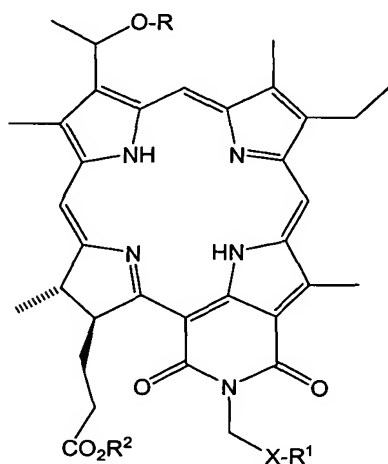


17. The compound of claim 5 having the formula:



or a pharmaceutically acceptable derivative thereof.

18. The compound of claim 5 having the formula



5

or a pharmaceutically acceptable derivative thereof, wherein:

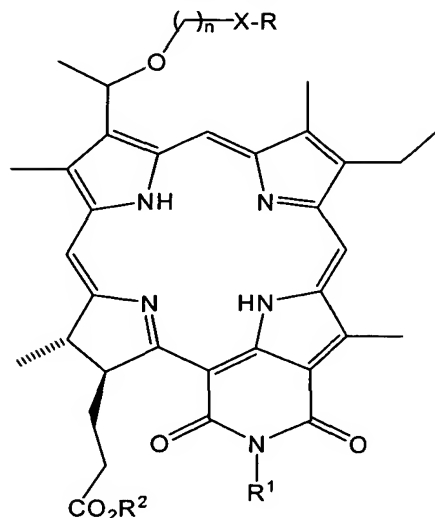
X is an aryl or heteroaryl group;

R and R<sup>1</sup> are each independently alkyl, aryl, or heteroaryl groups having 1 – 20 carbon atoms, wherein at least one of R and R<sup>1</sup> is substituted with at least one fluorine atom; and

10

R<sup>2</sup> is an alkyl group, optionally substituted with one or more fluorine atoms.

19. The compound of claim 5 having the formula



or a pharmaceutically acceptable derivative thereof, wherein:

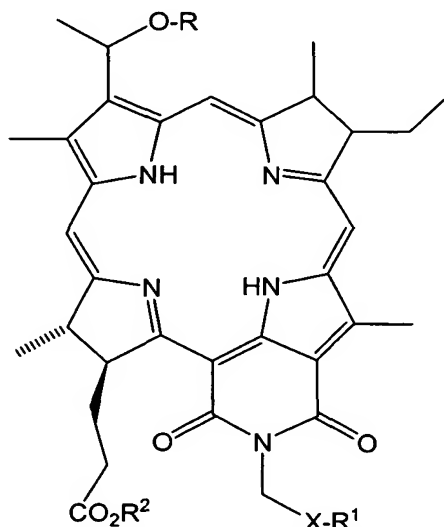
X is an aryl or heteroaryl group;

**5**      **n** is an integer from 0 to 6;

R and R<sup>1</sup> are each independently alkyl, aryl, or heteroaryl groups having 1 – 20 carbon atoms, wherein at least one of R and R<sup>1</sup> is substituted with at least one fluorine atom; and

**10** R<sup>2</sup> is an alkyl group, optionally substituted with one or more fluorine atoms.

20. The compound of claim 5 having the formula



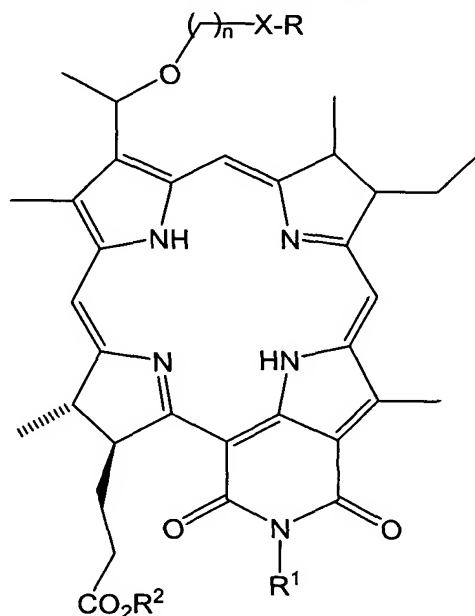
or a pharmaceutically acceptable derivative thereof, wherein:

X is an aryl or heteroaryl group;

R and R<sup>1</sup> are each independently alkyl, aryl, or heteroaryl groups having 1 – 20 carbon atoms, wherein at least one of R and R<sup>1</sup> is substituted with at least one fluorine atom; and

- 5        R<sup>2</sup> is an alkyl group, optionally substituted with one or more fluorine atoms.

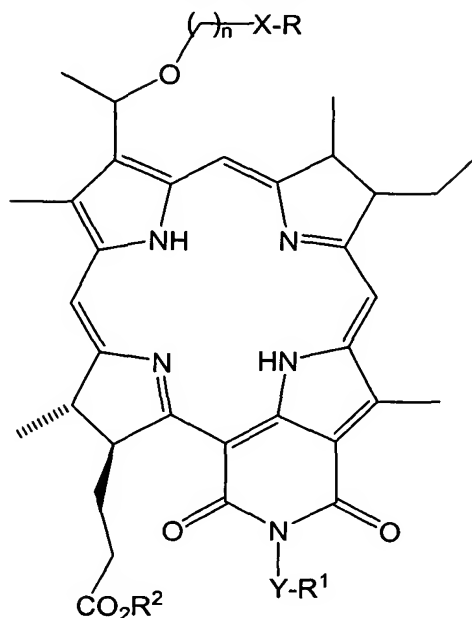
21.    The compound of claim 5 having the formula



or a pharmaceutically acceptable derivative thereof, wherein:

- 10        X is an aryl or heteroaryl group;  
           n is an integer from 0 to 6;  
           R and R<sup>1</sup> are each independently alkyl, aryl, or heteroaryl groups having 1 – 20 carbon atoms, wherein at least one of R and R<sup>1</sup> is substituted with at least one fluorine atom; and
- 15        R<sup>2</sup> is an alkyl group, optionally substituted with one or more fluorine atoms.

22. The compound of claim 5 having the formula



or a pharmaceutically acceptable derivative thereof, wherein:

X and Y are each independently an aryl or heteroaryl group;

5 n is an integer from 0 to 6;

R and R<sup>1</sup> are each independently alkyl, aryl, or heteroaryl groups having 1 – 20 carbon atoms, wherein at least one of R and R<sup>1</sup> is substituted with at least one fluorine atom; and

10 R<sup>2</sup> is an alkyl group, optionally substituted with one or more fluorine atoms.

23. A pharmaceutical composition, comprising a compound of claim 1 or a pharmaceutically acceptable derivative thereof in a pharmaceutically acceptable carrier.

24. An article of manufacture, comprising packaging material and a  
 15 compound of claim 1 or a pharmaceutically acceptable derivative of a compound of claim 1 contained within the packaging material, wherein the compound or salt thereof is effective in a photodynamic therapy treatment for ameliorating the symptoms of a hyperproliferative disorder; and the packaging material includes a label that indicates that the compound or salt thereof is

used in a photodynamic therapy treatment for ameliorating the symptoms of a hyperproliferative disorder.

25. The compound of claim 1 or a pharmaceutically acceptable derivative thereof when used for the treatment of hyperproliferative tissue.

5           26. The compound of claim 1 or a pharmaceutically acceptable derivative thereof when used to detect a hyperproliferative tissue.

27. The compound of claim 1 or a pharmaceutically acceptable derivative thereof when used in a photodynamic therapy.

28. The compound of claim 1 or a pharmaceutically acceptable  
10 derivative thereof when used to destroy a target composition within a subject.

29. Use of the compound of claim 1 or a pharmaceutically acceptable derivative thereof for formulation of a medicament for the treatment of hyperproliferative disorders.

30. A method for administering a therapy to a target, comprising:  
15           (i) administering to a subject the compound of claim 1 or a pharmaceutically acceptable derivative thereof that preferentially associates with the target, and  
             (ii) irradiating the subject with light of a wavelength and total fluence sufficient to produce a therapeutic effect.

20           31. The method of claim 30, wherein the target is selected from the group consisting of: a vascular endothelial tissue, a neovasculature tissue, a neovasculature tissue present in an eye, an abnormal vascular wall of a tumor, a solid tumor, a tumor of a head, a tumor of a neck, a tumor of an eye, a tumor of a gastrointestinal tract, a tumor of a liver, a tumor of a breast, a tumor of a  
25 prostate, a tumors of a lung, a nonsolid tumor, malignant cells of one of a hematopoietic tissue and a lymphoid tissue, lesions in a vascular system, a

diseased bone marrow, and diseased cells in which the disease is one of an autoimmune and an inflammatory disease.

32. The method of claim 30, wherein the target composition is selected from the group consisting of bacteria, viruses, fungi, protozoa, and  
5 toxins.

33. The method of claim 30, further comprising the step of allowing sufficient time for any of the compound that is not preferentially associated to the target tissue to clear from non-target tissue of the subject prior to the step of irradiating.

10 34. The method of claim 30 wherein the compound is conjugated to a targeting agent.

35. The method of claim 34 wherein the targeting agent is one of an antibody or an antibody fragment that is specific in binding with the target tissue.

15 36. The method of claim 34 wherein the targeting agent is a peptide that is specific in binding with the target tissue.

37. The method of claim 34, wherein the targeting agent is a liposomal preparation.

20 38. A method of photodynamic therapy for treating hyperproliferative tissue in a subject, comprising:

(i) administering to the subject the compound of claim 1 or a pharmaceutically acceptable derivative thereof that preferentially associates with the hyperproliferative tissue, and

(ii) irradiating the subject with light of a wavelength and  
25 fluence sufficient to activate the compound, whereby the hyperproliferative tissue is destroyed or impaired.

39. A method for detecting the presence of a hyperproliferative tissue in a subject comprising:

- (i) administering to the subject a sufficient quantity of the compound of claim 1 or a pharmaceutically acceptable derivative thereof that preferentially associates with the hyperproliferative tissue; and
- (ii) visualizing the compound within the patient.

40. The method of claim 39 wherein the step of visualizing is accomplished by generating an MRI image of at least a part of the patient's body.

41. The method of claim 39 wherein the step of visualizing is accomplished by exposing the conjugated compound with light of sufficient energy to cause the compound to fluoresce.

42. A method for detecting a target in a biological sample, comprising:

- (i) adding to the biological sample the compound of claim 1 or a pharmaceutically acceptable derivative thereof that binds to the target; and
- (ii) detecting the compound.

43. The method of claim 42, wherein the biological sample is selected from the group consisting of blood, urine, saliva, tears, synovial fluid, sweat, interstitial fluid, sperm, cerebrospinal fluid, ascites fluid, and/or tumor tissue biopsy and circulating tumor cells.

44. A method of diagnosing an infecting agent in a patient, comprising:

- (i) conjugating to the compound of claim 1 or a pharmaceutically acceptable derivative thereof a targeting agent specific for the infecting agent, whereby a conjugated compound is formed;
- (ii) administering to the patient the conjugated compound; and
- (iii) visualizing the conjugated compound within the patient.

45. The method of claim 44 wherein the step of visualizing is accomplished by generating a MRI image of at least a part of the patient's body.

5 46. The method of claim 44 wherein the step of visualizing is accomplished by exposing the conjugated compound with light of sufficient energy to cause the compound to fluoresce.

47. A method of generating an image of a target tissue or target composition in a subject, comprising:

- 10 (i) administering to the subject the compound of claim 1 or a pharmaceutically acceptable derivative thereof ; and
- (ii) generating an image of at least a part of the subject to which the compound has preferentially associated.

48. The method of claim 47 wherein the image is a nuclear imaging image.

15 49. A method of labeling a target tissue for diagnostic radiology, comprising:

- (i) administering to a subject the compound of claim 1 or a pharmaceutically acceptable derivative thereof; and
- 20 (ii) allowing sufficient time for any compound that is not preferentially associated to the target tissue to clear from non-target tissue of the subject, whereby the target tissue can be distinguished from non-target tissue in an MRI image of the subject.

50. A method of providing a medical therapy to an animal, comprising:

- 25 (i) administering to the animal the compound of claim 1 or a pharmaceutically acceptable derivative thereof, and
- (ii) irradiating the animal with light of a wavelength and fluence sufficient to activate the compound, whereby the hyperproliferative tissue is destroyed or impaired.



51. The compound of claim 1 or a pharmaceutically acceptable derivative thereof when used for the labeling of a target tissue for diagnostic radiology.

52. A kit to treat hyperproliferative disorders, comprising the  
5 compound of claim 1 or a pharmaceutically acceptable derivative thereof and instructions teaching a method of photodynamic therapy.

53. A kit to label specific tissues for diagnostic radiology, comprising the compound of claim 1 or a pharmaceutically acceptable derivative thereof and instructions teaching a method of magnetic resonance imaging.

10 54. A combination, comprising:  
the compound of claim 1 or a pharmaceutically acceptable derivative thereof ; and  
a light source.

15 55. A combination, comprising:  
the compound of claim 1 or pharmaceutically acceptable derivatives thereof ; and  
a magnetic resonance imaging device.

56. A pharmaceutical composition, comprising a compound of claim  
3 or a pharmaceutically acceptable derivative thereof in a pharmaceutically  
20 acceptable carrier.

57. An article of manufacture, comprising packaging material and a  
compound of claim 3 or a pharmaceutically acceptable derivative of a  
compound of claim 3 contained within the packaging material, wherein the  
compound or salt thereof is effective in a photodynamic therapy treatment for  
25 ameliorating the symptoms of a hyperproliferative disorder; and the packaging  
material includes a label that indicates that the compound or salt thereof is  
used in a photodynamic therapy treatment for ameliorating the symptoms of a  
hyperproliferative disorder.

58. The compound of claim 3 or a pharmaceutically acceptable derivative thereof when used for the treatment of hyperproliferative tissue.

59. The compound of claim 3 or a pharmaceutically acceptable derivative thereof when used to detect a hyperproliferative tissue.

5 60. The compound of claim 3 or a pharmaceutically acceptable derivative thereof when used in a photodynamic therapy.

61. The compound of claim 3 or a pharmaceutically acceptable derivative thereof when used to destroy a target composition within a subject.

62. Use of the compound of claim 3 or a pharmaceutically acceptable derivative thereof for formulation of a medicament for the treatment of hyperproliferative disorders.

10

63. A method for administering a therapy to a target, comprising:

(i) administering to a subject the compound of claim 3 or a pharmaceutically acceptable derivative thereof that preferentially associates with the target, and

15 (ii) irradiating the subject with light of a wavelength and total fluence sufficient to produce a therapeutic effect.

64. The method of claim 63, wherein the target is selected from the group consisting of: a vascular endothelial tissue, a neovasculature tissue, a neovasculature tissue present in an eye, an abnormal vascular wall of a tumor, a solid tumor, a tumor of a head, a tumor of a neck, a tumor of an eye, a tumor of a gastrointestinal tract, a tumor of a liver, a tumor of a breast, a tumor of a prostate, a tumors of a lung, a nonsolid tumor, malignant cells of one of a hematopoietic tissue and a lymphoid tissue, lesions in a vascular system, a diseased bone marrow, and diseased cells in which the disease is one of an autoimmune and an inflammatory disease.

20

25

65. The method of claim 63, wherein the target composition is selected from the group consisting of bacteria, viruses, fungi, protozoa, and toxins.

5 66. The method of claim 63, further comprising the step of allowing sufficient time for any of the compound that is not preferentially associated to the target tissue to clear from non-target tissue of the subject prior to the step of irradiating.

67. The method of claim 63 wherein the compound is conjugated to a targeting agent.

10 68. The method of claim 67 wherein the targeting agent is one of an antibody or an antibody fragment that is specific in binding with the target tissue.

69. The method of claim 67 wherein the targeting agent is a peptide that is specific in binding with the target tissue.

15 70. The method of claim 67, wherein the targeting agent is a liposomal preparation.

71. A method of photodynamic therapy for treating hyperproliferative tissue in a subject, comprising:

20 (i) administering to the subject the compound of claim 3 or a pharmaceutically acceptable derivative thereof that preferentially associates with the hyperproliferative tissue, and

(ii) irradiating the subject with light of a wavelength and fluence sufficient to activate the compound, whereby the hyperproliferative tissue is destroyed or impaired.

25 72. A method for detecting the presence of a hyperproliferative tissue in a subject comprising:

- (i) administering to the subject a sufficient quantity of the compound of claim 3 or a pharmaceutically acceptable derivative thereof that preferentially associates with the hyperproliferative tissue; and
- (ii) visualizing the compound within the patient.

5           73. The method of claim 72 wherein the step of visualizing is accomplished by generating an MRI image of at least a part of the patient's body.

74. The method of claim 72 wherein the step of visualizing is accomplished by exposing the conjugated compound with light of sufficient  
10 energy to cause the compound to fluoresce.

75. A method for detecting a target in a biological sample, comprising:

- (i) adding to the biological sample the compound of claim 3 or a pharmaceutically acceptable derivative thereof that binds to the target; and
- 15 (ii) detecting the compound.

76. The method of claim 75, wherein the biological sample is selected from the group consisting of blood, urine, saliva, tears, synovial fluid, sweat, interstitial fluid, sperm, cerebrospinal fluid, ascites fluid, and/or tumor tissue biopsy and circulating tumor cells.

20           77. A method of diagnosing an infecting agent in a patient, comprising:

- (i) conjugating to the compound of claim 3 or a pharmaceutically acceptable derivative thereof a targeting agent specific for the infecting agent, whereby a conjugated compound is formed;
- 25 (ii) administering to the patient the conjugated compound; and
- (iii) visualizing the conjugated compound within the patient.

78. The method of claim 77 wherein the step of visualizing is accomplished by generating a MRI image of at least a part of the patient's body.

5 79. The method of claim 77 wherein the step of visualizing is accomplished by exposing the conjugated compound with light of sufficient energy to cause the compound to fluoresce.

80. A method of generating an image of a target tissue or target composition in a subject, comprising:

- 10 (i) administering to the subject the compound of claim 3 or a pharmaceutically acceptable derivative thereof ; and
- (ii) generating an image of at least a part of the subject to which the compound has preferentially associated.

81. The method of claim 80 wherein the image is a nuclear imaging image.

15 82. A method of labeling a target tissue for diagnostic radiology, comprising:

- (i) administering to a subject the compound of claim 3 or a pharmaceutically acceptable derivative thereof; and
- 20 (ii) allowing sufficient time for any compound that is not preferentially associated to the target tissue to clear from non-target tissue of the subject, whereby the target tissue can be distinguished from non-target tissue in an MRI image of the subject.

83. A method of providing a medical therapy to an animal, comprising:

- 25 (i) administering to the animal the compound of claim 3 or a pharmaceutically acceptable derivative thereof, and
- (ii) irradiating the animal with light of a wavelength and fluence sufficient to activate the compound, whereby the hyperproliferative tissue is destroyed or impaired.

84. The compound of claim 3 or a pharmaceutically acceptable derivative thereof when used for the labeling of a target tissue for diagnostic radiology.

5 85. A kit to treat hyperproliferative disorders, comprising the compound of claim 3 or a pharmaceutically acceptable derivative thereof and instructions teaching a method of photodynamic therapy.

86. A kit to label specific tissues for diagnostic radiology, comprising the compound of claim 3 or a pharmaceutically acceptable derivative thereof and instructions teaching a method of magnetic resonance imaging.

10 87. A combination, comprising:  
the compound of claim 3 or a pharmaceutically acceptable derivative thereof ; and  
a light source.

15 88. A combination, comprising:  
the compound of claim 3 or pharmaceutically acceptable derivatives thereof ; and  
a magnetic resonance imaging device.

20 89. A pharmaceutical composition, comprising a compound of claim 5 or a pharmaceutically acceptable derivative thereof in a pharmaceutically acceptable carrier.

25 90. An article of manufacture, comprising packaging material and a compound of claim 5 or a pharmaceutically acceptable derivative of a compound of claim 5 contained within the packaging material, wherein the compound or salt thereof is effective in a photodynamic therapy treatment for ameliorating the symptoms of a hyperproliferative disorder; and the packaging material includes a label that indicates that the compound or salt thereof is used in a photodynamic therapy treatment for ameliorating the symptoms of a hyperproliferative disorder.

91. The compound of claim 5 or a pharmaceutically acceptable derivative thereof when used for the treatment of hyperproliferative tissue.

92. The compound of claim 5 or a pharmaceutically acceptable derivative thereof when used to detect a hyperproliferative tissue.

5 93. The compound of claim 5 or a pharmaceutically acceptable derivative thereof when used in a photodynamic therapy.

94. The compound of claim 5 or a pharmaceutically acceptable derivative thereof when used to destroy a target composition within a subject.

95. Use of the compound of claim 5 or a pharmaceutically  
10 acceptable derivative thereof for formulation of a medicament for the treatment of hyperproliferative disorders.

96. A method for administering a therapy to a target, comprising:  
(i) administering to a subject the compound of claim 5 or a pharmaceutically acceptable derivative thereof that preferentially associates  
15 with the target, and  
(ii) irradiating the subject with light of a wavelength and total fluence sufficient to produce a therapeutic effect.

97. The method of claim 96, wherein the target is selected from the group consisting of: a vascular endothelial tissue, a neovasculature tissue, a  
20 neovasculature tissue present in an eye, an abnormal vascular wall of a tumor, a solid tumor, a tumor of a head, a tumor of a neck, a tumor of an eye, a tumor of a gastrointestinal tract, a tumor of a liver, a tumor of a breast, a tumor of a prostate, a tumors of a lung, a nonsolid tumor, malignant cells of one of a hematopoietic tissue and a lymphoid tissue, lesions in a vascular system, a  
25 diseased bone marrow, and diseased cells in which the disease is one of an autoimmune and an inflammatory disease.

98. The method of claim 96, wherein the target composition is selected from the group consisting of bacteria, viruses, fungi, protozoa, and toxins.

5 99. The method of claim 96, further comprising the step of allowing sufficient time for any of the compound that is not preferentially associated to the target tissue to clear from non-target tissue of the subject prior to the step of irradiating.

100. The method of claim 96 wherein the compound is conjugated to a targeting agent.

10 101. The method of claim 100 wherein the targeting agent is one of an antibody or an antibody fragment that is specific in binding with the target tissue.

102. The method of claim 100 wherein the targeting agent is a peptide that is specific in binding with the target tissue.

15 103. The method of claim 100, wherein the targeting agent is a liposomal preparation.

104. A method of photodynamic therapy for treating hyperproliferative tissue in a subject, comprising:

20 (i) administering to the subject the compound of claim 5 or a pharmaceutically acceptable derivative thereof that preferentially associates with the hyperproliferative tissue, and  
(ii) irradiating the subject with light of a wavelength and fluence sufficient to activate the compound, whereby the hyperproliferative tissue is destroyed or impaired.

25 105. A method for detecting the presence of a hyperproliferative tissue in a subject comprising:



- (i) administering to the subject a sufficient quantity of the compound of claim 5 or a pharmaceutically acceptable derivative thereof that preferentially associates with the hyperproliferative tissue; and
- (ii) visualizing the compound within the patient.

**5**           106. The method of claim 105 wherein the step of visualizing is accomplished by generating an MRI image of at least a part of the patient's body.

            107. The method of claim 105 wherein the step of visualizing is accomplished by exposing the conjugated compound with light of sufficient  
**10**           energy to cause the compound to fluoresce.

            108. A method for detecting a target in a biological sample, comprising:

- (i) adding to the biological sample the compound of claim 5 or a pharmaceutically acceptable derivative thereof that binds to the target; and
- 15**           (ii) detecting the compound.

            109. The method of claim 108, wherein the biological sample is selected from the group consisting of blood, urine, saliva, tears, synovial fluid, sweat, interstitial fluid, sperm, cerebrospinal fluid, ascites fluid, and/or tumor tissue biopsy and circulating tumor cells.

**20**           110. A method of diagnosing an infecting agent in a patient, comprising:

- (i) conjugating to the compound of claim 5 or a pharmaceutically acceptable derivative thereof a targeting agent specific for the infecting agent, whereby a conjugated compound is formed;
- 25**           (ii) administering to the patient the conjugated compound; and
- (iii) visualizing the conjugated compound within the patient.

111. The method of claim 110 wherein the step of visualizing is accomplished by generating a MRI image of at least a part of the patient's body.

112. The method of claim 110 wherein the step of visualizing is accomplished by exposing the conjugated compound with light of sufficient energy to cause the compound to fluoresce.

113. A method of generating an image of a target in a subject, comprising:

- (i) administering to the subject the compound of claim 5 or a pharmaceutically acceptable derivative thereof ; and
- (ii) generating an image of at least a part of the subject to which the compound has preferentially associated.

114. The method of claim 113 wherein the image is a nuclear imaging image.

115. A method of labeling a target tissue for diagnostic radiology, comprising:

- (i) administering to a subject the compound of claim 5 or a pharmaceutically acceptable derivative thereof; and
- (ii) allowing sufficient time for any compound that is not preferentially associated to the target tissue to clear from non-target tissue of the subject, whereby the target tissue can be distinguished from non-target tissue in an MRI image of the subject.

116. A method of providing a medical therapy to an animal, comprising:

- (i) administering to the animal the compound of claim 5 or a pharmaceutically acceptable derivative thereof, and
- (ii) irradiating the animal with light of a wavelength and fluence sufficient to activate the compound, whereby the hyperproliferative tissue is destroyed or impaired.

117. The compound of claim 5 or a pharmaceutically acceptable derivative thereof when used for the labeling of a target tissue for diagnostic radiology.

118. A kit to treat hyperproliferative disorders, comprising the  
5 compound of claim 5 or a pharmaceutically acceptable derivative thereof and instructions teaching a method of photodynamic therapy.

119. A kit to label specific tissues for diagnostic radiology, comprising the compound of claim 5 or a pharmaceutically acceptable derivative thereof and instructions teaching a method of magnetic resonance imaging.

10 120. A combination, comprising:  
the compound of claim 5 or a pharmaceutically acceptable derivative thereof ; and  
a light source.

121. A combination, comprising:  
15 the compound of claim 5 or pharmaceutically acceptable derivatives thereof ; and  
a magnetic resonance imaging device.

122. The compound of claim 17 or a pharmaceutically acceptable derivative thereof when used for the detection or treatment or both of  
20 hyperproliferative tissue.

123. The compound of claim 18 or a pharmaceutically acceptable derivative thereof when used for the detection or treatment or both of hyperproliferative tissue.

124. The compound of claim 19 or a pharmaceutically acceptable  
25 derivative thereof when used for the detection or treatment or both of hyperproliferative tissue.